

for about a month I was District Engineer of St. Paul and of Rock Island, and that wasn't the easiest life in the world, either. I had to sign all their efficiency reports at that time. It was an extremely difficult operation, but we got through it.

And in June 1949 I received orders to take over the Mobile, Alabama, District as District Engineer. The wheel had made a complete turn.

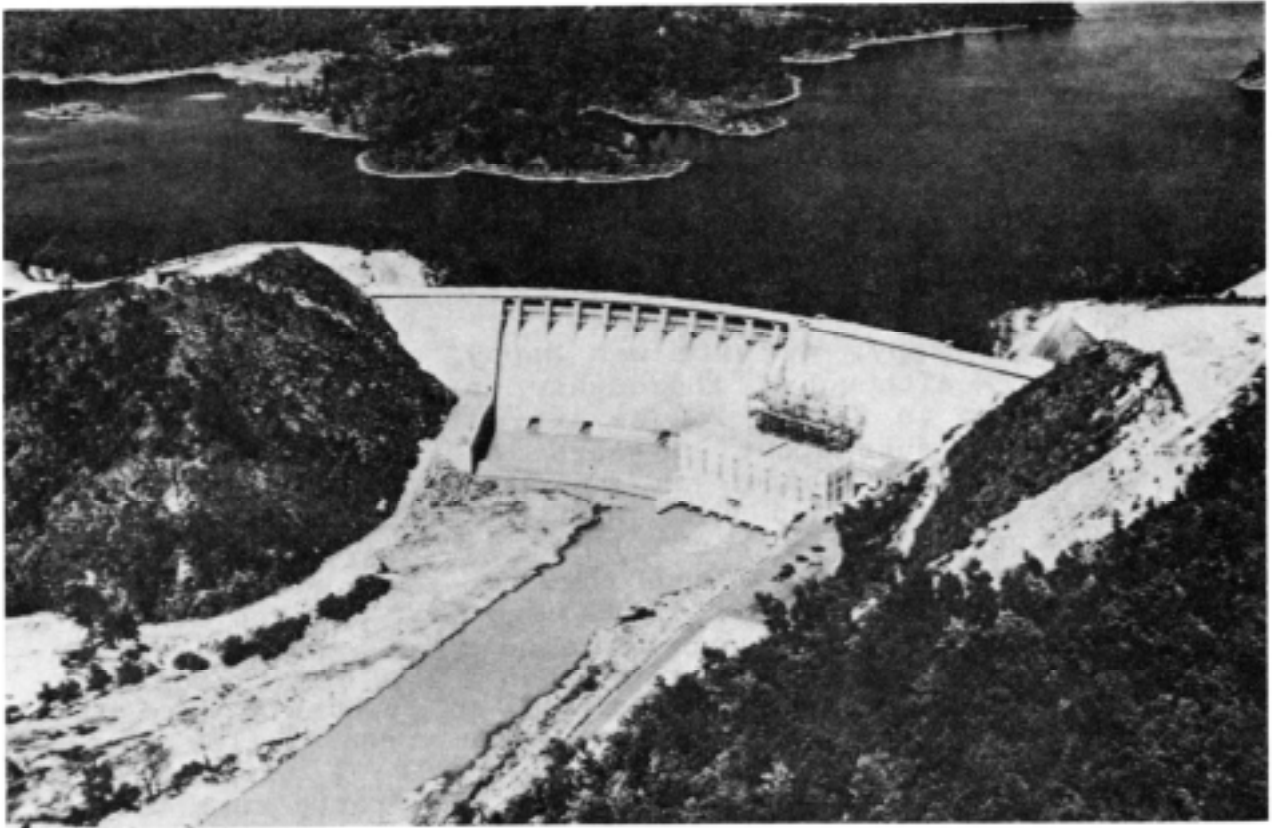
Q: You must have been happy about the Mobile assignment.

A: I was happy, my wife was happy, and my kids were happy, although I thoroughly enjoyed the work and life up in St. Paul. We arrived in Mobile in June of '49, just about 20 years later than when I had first arrived here, and we entered a District which was real big and real proud of all the effort it had put out in World War II. Many of the key civilian personnel were the same ones under whom I had worked in 1929. There were half a dozen of the key branch chiefs and division chiefs who had been in positions of authority when I was looking up at the District from the bottom, and suddenly here I am with them, still the same young fellow who didn't know anything back in 1929. I think they were glad to have me back, but I'm pretty sure they figured they had it made.

On my last trip to Washington before going to Mobile, the new Chief, Lew Pick-he's the one who moved me down there--said that the chief technical assistant down there had been District Engineer during World War II, and he thought he was still running the District. I was to go down and get him under control. There had been one District Engineer since then, but he never could break the system. So I was to go get it back into the routine.

Q: Do you think your assignment to Mobile was a combination of your being the right man for that job and your earlier experience with the District?

A: I don't know. I was in the Chief's office in about March or April. It was the first time I had been there since Lew Pick had become Chief [1 March



Allatoona Dam and Powerhouse, Etowah River, Georgia.

1949], and I reported in to him to be polite and do what I should do. He sat me down and asked how I liked what I was doing in the St. Paul District. I said, "I think it's wonderful." Incidentally, I had been in contact with him in the St. Paul District when he was Division Engineer in the Missouri River Division. I'd had a good deal of contact with him, particularly around the North Dakota area. I said I couldn't think of anything better. He said, "Well, that isn't my question. It's time for you to move. Where would you like to go next?" I said, "Mobile." He didn't think that was a bad idea, and in less than two weeks I had orders to go to Mobile. Now that's all I know about it. I was glad I had built up to it a little bit. Having done the work in St. Paul, I had a little better background to start in getting so-called "control!" of the District.

Q: How did the workload in Mobile compare with that in St. Paul?

A: Oh it was much bigger in Mobile. A much bigger workload and a heavy military construction load as well as civil works.

Q: Could we touch on a couple of the most important projects on each side?

A: Well, there was also a good feud going on between the District and the Division, the South Atlantic Division, which was not very helpful. I got to Mobile and found this going on. They were in the middle of a major construction program. The Allatoona Dam was about a third to one-half completed.⁹⁰ The Jim Woodruff Reservoir was getting pretty well started, and there were lots of other lesser projects.⁹¹

But at Allatoona there had been a great furor between the District and Division over a particular change order. I think we were about on change order number 150 about the time I arrived there, but change order 39 or something was still at issue. Immediately I got a call to come up to the Division office and meet with the Division Engineer, Mason Young, who had been an officer I had dealt with and known before.⁹² He sat me down and told me everything wrong with everybody in

the Mobile District, which was a great introduction. In essence it was "they don't think right, they don't follow the rules of the military or the system, I hope you can improve it." I didn't make any promises because I didn't think that was the way to start off.

Fortunately, as I knew in advance, about a month later Bernard L. Robinson was to become the Division, Engineer of South Atlantic Division.⁹³ I didn't know him as well, but as soon as he arrived I asked permission to go up and see him. I went up and told him what had happened. I told him what I thought of it. I told him that I was aware there was conflict and I knew, as far as I could tell, both sides were at fault to some extent. This wasn't going to make life very pleasant for either one of us if we let it continue. So we agreed that if we had something of real magnitude that we felt strongly about, either side, we'd call the other and discuss it before we let the thing flow up through channels and bring things to a grinding halt. We did that, and after about six months I think we had what you could call a pretty good relationship between the two organizations.

Q: Do you think the conflict involved personalities mainly?

A: Oh, it was the usual thing. You get yourself built into a position where you want to support your man and the other wants to support his man and so on, and you build it up. Personalities, yes, not real personal antagonism but bull-headed on both sides. I think we gained on it.

Q: Well, what was the specific issue of the disputed change order?

A: Oh it was the approval of the extent of certain things and the price to be paid. A variety of little things that were important but not vital. Well, for instance, I found out early and was told that the chief of the engineering division in Mobile was pretty well set in his ways, and that the chief technical assistant liked to just go ahead and give decisions and not bother the District Engineer.

This had happened to me very early in life up in the St. Paul District. Life was real smooth for a while, but I discovered people sticking their heads in the door and speaking to my secretary. And after a while I said, "Minnie, what are those folks coming in here and asking about?" "Oh," she said, "they want to know what you feel about so-and-so and what you'd like to do." I said, "Well, I'm glad to know and I appreciate it. I hope you told them the right thing." She said she told them just what I'd do. I said, "Fine," and immediately thereafter started looking for a promotion for her to be moved up the ladder so I could speak for myself.

Okay, well here I am down in the Mobile District, and it's much more ingrained, bigger, not a conspiracy, it's just the way it had been run. I thought that I had to show them that I knew a little bit about engineering. I kept looking at the plans--you had to sign all these plans as District Engineer, there were a slew of them coming through--and so I kept looking as I passed them on until I could find one where there was a point I thought was worth asking about, and I wondered why they were doing it that way. I thought, I wonder if they know, because I think maybe it should be done another way.

So I called the chief technical assistant in. His name was Herb Collins. He was a helluva fine man. He'd been here when I was a second lieutenant. I said, "Herb, how come we do thus and so on this thing? Look at this drawing." And he got down and looked at the drawing with me. I raised my issue and he gave me an answer. We talked it over, and I said I couldn't accept that. So he got Buck Weston over from the engineering division. Buck came in, and we went through the same act and got to the same place, and he really didn't know either.. And he went to the chief of the design branch, and we ended up with about seven people standing in my office. Then we got down to the guy who really had done this. When I asked the question again to him he told me why. And I said, "Wouldn't it possibly be better to do it this way instead of that way?" He said, "Not only possibly, but now that you've raised it, I think it's quite true, it would be better. Yes, I didn't think about that." He

decided he'd like to go back and think about it again, and of course all of the guys marched out of the room, and that's the last time I looked at a set of plans while I was there. I had established the point. I sure couldn't try to do the engineering in the front office, but it was something I had learned in St. Paul again that came of use down here.

We had a pretty big navigation program in the Mobile District. The Warrior-Tombigbee had been established way back in the early 1900s; little low structures, the movable dams, the kind that go up and down.⁹⁴ The structures were wooden to a large extent. The traffic was picking up a little bit, and it was getting pretty dangerous to keep those things going. They were getting pretty worn out. So we were in the program of designing and getting ready to build a dam at Demopolis to replace three or four of the old ones upstream as the start of an improvement. That was a fairly good-sized project.

Unfortunately, the bidder who was low bidder was primarily a military construction outfit rather than a dam builder. I called him in before awarding the contract and said, "I have no excuse for not awarding the contract. You've made bond, you've got good capability, but I want to advise you that you ought to hire somebody or merge with somebody that knows something about handling water because this is going to be different." He said he knew all about it. I said, "No, I know the second bidder, a contractor from Minnesota, and they are good and they handle water. The bids weren't too far different, and you'd do well to try and take him on." But no, he wouldn't do it, so we awarded it. He didn't give the resident project manager enough authority. He didn't do the things you need to do in working on a water project. So just a year later he came back to say that if it was all right he was going to let Al Johnson Construction Company take over and finish the job at no increase in cost. That's who I had wanted him to meld with to begin with. This one was a pretty good exercise, and it worked. They built a pretty good job and we got out of a problem by not having things failing.

At Jim Woodruff Dam we had a terrible time with the foundations because it was limestone and there were caverns. It was pretty tough, and you couldn't tell what was there. We had an awful lot of dental excavation in excavating for each block in the dam because you come to different levels, and you clean it out to a point, and still there was a little rotten spot over in the corner. And you'd get in there with dental work and get it out, and it would open bigger and bigger until pretty soon they'd say. "You've come down this far, you might as well take it all out." And of course dental work was at one price and ordinary excavation at a considerably different price. This went on, and there were hundreds of photographs taken. Soon we had a great conflict going on with the contractor [Perini Corporation]. Our resident engineer and their project manager were just set in concrete on it.

I finally invited Lou Perini [the corporation president] to go out with me on the division's boat that was there for the moment and [to] stay until we could solve it and [to] bring his project manager with him. He could bring an engineer but no lawyer. We were going to do the same. So we went out in the boat in the intercoastal waterway over in Choctawhatchee Bay near Destin, and we cruised around; worked hours looking at these photographs trying to make up our minds and trying to reach some kind of compromise. When we would get kind of mad at each other, we'd stop and go fishing or go swimming, and then come back and do it some more.

We didn't make much progress, so finally I said, "Lou, I think we have just got to take each one of these things and go down and arbitrarily agree on a level. There's no way in the world now that it's dug to prove it. There certainly is a lot of excavation that is deliberately dental, and now we're trying to pay you for it in general excavation, and on the other hand there's a lot of work that you are claiming dental excavation for that really shouldn't be." He agreed but wondered how we could reach it. So we just sat there with these two guys with us, and we hammered it out, and we reached agreement on each one. We made a change order accordingly. When Perini got back to Boston, he called me on the phone and said, "Well, I don't

know what you think about it or what your folks think about it, but my lawyers tell me never to get on another boat with you!"

Q: How much business did you do with out-of-town contractors? That's not unusual, I know, in other places.

A: Well, the one at Allatoona was from Baltimore. These were primarily dam builders who had experience in that field. Well, anyhow, there were innumerable projects of that kind. While I was here we went on to start design on one or two replacement structures. To show you why it was necessary, I was up in the Warrior River inspecting when we were dewatering one of our old locks and dams, just the lock, to do some repair work to keep them running. Remember I told you that the top of the dam was movable? Well, in high water the boat tows would go over them, but every now and then they'd still go over after the water had gotten a little too low, so there would be a sag or two in the thing. Well, while we were looking down into this little bitty old lock chamber--there were about three or four workmen down in the bottom with picks and shovels working away--a catfish about three feet long swam through the wall! There were timber sides to the thing, and they had rotted out. That fish swam through, and the workmen were all going after it to try and get him with their shovels and picks. I thought if I ever needed an example of why we needed to replace these locks and dams, I knew where I'd find it.

The Mobile District was responsible for civil works in about a half of Mississippi, three-quarters of Alabama, half of Georgia, the panhandle of Florida over near Tallahassee, and a teensy little bit of Tennessee. But in military construction it had responsibility for all of Mississippi, all of Alabama, a good share of Georgia including Fort Benning, the panhandle of Florida including Eglin Field, and Tennessee. It was a tremendous area, and with the fracas in Korea they suddenly needed to refurbish the ammunition plants and ammunition loading plants, and warehousing, and tank repair. There was a requirement for more barracks space and training space and so on in places like Benning and McClellan. And at Eglin Field there was a big

burst of activity. So all in all our military construction program was tremendous and took a vast amount of effort, and again proved to me the desirability of the system where the Corps of Engineers does both kinds of construction. When an emergency arises you can shift a going organization, people who know each other, people who understand the procedure.

Q: Did you expand at that point by bringing a lot of people in from the outside?

A: Some, but more and more we got more contract work. We got a little bit from the outside, but mainly we shifted inside because the civil works appropriations dropped off. The knowledgeable people were there to be moved around without really moving. It was a tremendous payoff to me. I hadn't been in that situation in World War II. I had read about it, and I believed what was said, but now I knew it. I mean I had read how it had helped in World War II.

I had a very interesting thing show up in military construction. I got a phone call from the Chief's office on a Friday saying that they wanted me to come to Washington Monday morning: to be there to negotiate a contract with a combine which I was to put together and have show up on the spot on a classified project. I wanted to know what kind of project, but they said it was classified and they couldn't tell me. I said, "How do I put some combine together if I don't even know what I'm talking about." They answered, "I don't know what you're going to do, but you have got to do it, and you'll be here Monday morning." I asked about several different things, and when I said "oil refinery" they said, "Now you're talking. You come up with people that are capable of building an oil refinery and we could probably do business."

So I immediately called in all my boys and we really puzzled over it. We put together a combine that comprised an earth-moving outfit, a mechanical outfit, and a general construction outfit. We met in Washington and sure enough that's what was needed. So when I got to the Chief's office, I asked what they were going to do. They said, "We? You're going to negotiate the contract. You are

going to be the contracting officer." Whew: And I knew nothing. But it was going to be CPFF [cost plus a fixed fee], and we had confidence in these people.⁹⁵

Jerry Galloway was the man from the Chief's office who was responsible at this moment.⁹⁶ Between us we negotiated the terms in some detail. We didn't know what it was about. To this day I can only guess what it was. I'm rather well sure what it was. It was in the nerve gas field, and we were the first step and the second step was going to go on out in Denver under General Sturgis as Division Engineer out there. But this was a real hot project and presumably had the presidential approval to be at the top of the list and everything was go-zoom, zoom, ZOOM. There couldn't be any delays. Here I was. I had a Division Engineer in Atlanta, but the architect-engineer people and the operating people, who were the same, were headquartered in New York. so the North Atlantic Division was supervising their contract. The Chemical Corps was involved in it. And if you want to get into something quite similar to what I described in India in World War II, well, here we had it again. I asked for an experienced resident engineer, preferably a reserve officer on extended active duty, and got one, and he was good. The rest of the staff we more or less took out of our hide here in order to get the thing going pretty well.

It was up in Muscle Shoals, and we got it started. Oh but it had its problems in design and plans, but we were still under orders to get the damn thing built and not show any delay. We were to work overtime. We had to build a thing we called a phosphate works, which was a cover name. We didn't know what the real product was to be. We had an adjoining chlorine plant to be built under an Italian patent. We had to follow certain requirements of their patent in order to build it. The early part of the work went pretty well and easily: Let's see, Creighton, Daniels, and Moss were the contractors. They are from Birmingham and Tennessee. They came along pretty well. There was a big demand for labor at that time. The project was full of special materials, stuff that you couldn't get anytime very quick.

But they got going, and after about three or four months we got word from the Chief's office that Mobile District was no longer in it. This was too confusing to try and run it the way it was being run, and . . . I concurred completely. We would cut loose, and it would come directly under the North Atlantic Division. I said, "Now, wait a minute, we put our people up there on this thing. Are you going to tell me we don't have the right to even talk to them?" They told us to phase ourselves out gradually. We had a right to step in and protest if we thought something was not being done properly until the thing got rolling better. They said, "Yes, you should protect your people and look out for their interests."

So it went on. I told Lieutenant Colonel '[Paul] Long, the area engineer, if he really got to a point where the requirements were pretty bad to call me, and I'd come and see what I could do. It went along, quite far along, and was under a mandatory overtime requirement. Everybody on the project worked overtime. That's the one way you got them and kept them to a large extent. But it looked like any other chemical plant. I mean everytime I go near a chemical plant there's a bunch of pressure vessels and expansion vessels, special pipe, and steam vents, and things going out in all directions.

I got a call from Colonel Long, who said, "We're just pouring money down the rat hole. It's just killing me, and we ought to stop but I can't get the Division to let me. We're paying overtime. We don't even have the materials on hand to see what we are going to be doing next week." So I decided to go up to the job site. We had a big room, and there were about 50 people around the table. There were some from Chemical Corps, and North Atlantic Division, and some from South Atlantic, some from the Chief's office, an architect-engineer team, some of the top people in the contractors, and me, and, of course, Long and his staff. We got into it to try and see what could be done. I got a general feeling that everybody really felt we were wasting money on the overtime because we weren't able to plan properly. But they all pointed out each time, "This is a presidential project that's been said to go ahead and nothing, nothing must slow it down."

They said, "The President is not going to call off the overtime. You are going to have to keep doing it."

Finally after about three or four hours, I said, "Okay, gentlemen, here's what's going to happen." (This was about a Thursday.) "I'm going to make a decision right now that on Monday the overtime stops except for project items which you know you need, and you know you've got materials enough ahead to keep working for a full week. Overtime without materials on hand is going to be out. Now I don't clearly have the authority to make this decision, but I'm going to make it. I'm notifying each of you visiting firemen that you may go back to your offices and all it takes is to get a telegram to me. I don't want it in a phone call, I want it in writing, saying you will reverse that decision. Just do that, and it will be reversed right that minute. But if I don't get something in writing by Monday morning, unprofitable overtime is going to stop. Now, do you understand that?" They said they did.

Well, there were great screams of anguish, you couldn't do this. The Chemical Corps said it was terrible, but I said, "Okay, you know the terms. You'll be home tonight and tomorrow, Saturday, Sunday, and Monday, you can telegraph." Well, come Monday morning, I had no telegrams. I'd had a lot of phone calls but no telegrams. So I called Colonel Long and said, "Okay, do you understand? If so, go ahead." Do you know, in about ten days we got down a directive stating that overtime would be stopped except where it was essential: So somebody just had to take the bull by the horns and do something to raise the issue.

Now the project was finished in somewhat good shape. I don't know that it ever accomplished much. I don't know, because we were never told what it was about. But the phosphate plant was turned over to TVA for whatever use they could make out of it in their fertilizer business, and the chlorine plant was sold to somebody after the war, too.

Q: It's a real challenge when you don't know what the work is for!

A: Incidentally, during my service here, we did have the groundbreaking for the Buford Dam, now Lake Lanier, just north of Atlanta, which happens to be [one of] the largest public use reservoirs in the hands of the Corps of Engineers.⁹⁷ Again, what I had learned out in Tulsa and Little Rock was useful in getting organized on that because it was obviously going to be the kind of reservoir that was ideal for public use. It has shown so ever since. It ranks number one every year. I have forgotten how many million visitor days, but there's a heck of a lot of them. In fact my family goes up nearly every Labor Day and goes sailing on Lake Lanier.

Q: Is there anything else you want to mention about your assignment in Mobile?

A: Well, yes, there is one feature I think I should bring out. While I was still in St. Paul, but announced as next District Engineer for Mobile, I received correspondence including a draft advertisement for selling a lot of land up at Huntsville. Mobile District wanted me to approve putting the advertisement in national magazines. The land in question was either the Ordnance or Chemical Corps depot. I don't remember which. It was being surplused and scheduled to be sold, and the big problem was what would the rights of former owners be? Would they get first choice or not? I sent them back posthaste and said that whoever was acting District Engineer was responsible for making decisions until such time as I arrived on the scene, so let him decide. I stayed out of that problem until taking over.

But I did take over, and this was one of our hot projects. We were in the throes of selling this half of the two Army installations when suddenly it was announced that von Braun and his crowd were moving over there from El Paso.⁹⁸ So the surplus was withdrawn and all the money and effort put in on these ads and the other planning went down the drain.

About six or eight months to a year later, in 1950, I was notified that a civilian just outside my office wanted to see me. They said that he sounded like a German. He spoke broken English, and he had

something he wanted me to do. I told them to bring him in, so they did, and it was von Braun. I spoke with him and he told me he had something he wanted the Mobile District to undertake. I didn't know whether we should or not, so I said, "Would you mind if I brought in some key people to listen to you?" He didn't mind. So I brought in about 15 people, and we sat in the conference room. He kept writing and drawing on the back of an envelope, and I kept slipping him a pad of paper, but he would push it away and go back to his envelope. I wanted something to refresh my memory when he left because he spoke pretty broken English at that time, and I couldn't understand too well. But I gradually hoisted in that he wanted us to design and build something that could hold a vehicle that was going to be capable of going to the moon, but when you fired it this stand was to be able to hold the vehicle in place so the engines could be tested and observed and evaluated. of course, this was something I had never thought about, nor had my staff, but we dug out of him all we could. We said we could undertake it if OCE gave us a directive and funds. He said, "That's fine, you'll get them." Sure enough very shortly thereafter we received instructions and funding to pursue the project. We hired the Parsons engineering firm out in Los Angeles as the AE, and so we in the Mobile District got involved in the missile business during 1950.

Q: Which is much sooner than you usually think of it starting.

A: Yes. We learned that von Braun was a real sharp cookie. One thing that particularly impressed us was that he never called on us to build a facility for him that couldn't be modified for the next generation. Thus it could continue in use year after year, and vehicle after vehicle. I think they're still using that first test stand at Huntsville. It had sleeves going through it so many places it looked like a birdcage, but it was set up to be modified as we went along. Whereas for the Air Force, we normally built a facility just to fit a particular missile. When that missile went down the road a ways, the facility was no longer useful.

We gained lots of experience building these things and getting into the thinking about it. This was the first time it dawned on me to think in these terms. I knew about the V-1 bombs and the V-2s. Both types had been in evidence on my trip through England and Belgium. As a matter of fact, both in London and Antwerp I had learned to seek cover in a basement entrance when the V-1 motor cut off and the click, click, click could not be heard. And on my way to visit a POL [petrol, oil, and lubricants] depot in Antwerp, we were running out of time and the officer guiding me said, "I think you better head back to Brussels because the visit to the depot will take too long to let you reach Brussels before dark." When we got to the edge of town they had a phone call waiting for him and there had been a V-2 bomb hit the depot about the time I would have been there. But I had just never thought of having any connection with such a weapon since.

So the Mobile District got started early into this aspect and then later on down the road, bingo, I run into the same thing again in positions like assistant chief for military construction, deputy chief, and Chief. I would run into von Braun again. It's just amazing how often these trails open up and keep crossing one another. I don't know that there is anything more that's vital, probably is and I don't know about it.

Q: Since you went from Mobile as District Engineer to Atlanta as Division Engineer, I would like to ask you to comment on the different roles as District and Division Engineer. Also, how did your work in those positions prepare you for your later assignments in OCE?

A: Well, first, from my point of view, would be the sudden shock of being ordered to Atlanta to become a Division Engineer. I had had three years in St. Paul District and just completed three years in the Mobile District, and here I was going to another rivers-and-harbors-type assignment. I had never thought about anything like that. But I went up to the Division and Colonel [Harry L.] Fox, who had been the deputy up there and whom I had known out in India--he was in General Farrell's engineering section in the theater headquarters--came down here to be District Engineer. Well, now moving from one